UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,190	09/05/2006	Wolf Peter Oettinger	710P001	5297

42754 7590 03/10/2009

Nields, Lemack & Frame, LLC
176 E. Main Street
Suite #5
Westborough, MA 01581

EXAMINER	
LE, TOAN M	

ART UNIT	PAPER NUMBER
2863	

MAIL DATE	DELIVERY MODE
03/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,190	OETTINGER, WOLF PETER	
	Examiner	Art Unit	
	TOAN M. LE	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,11-13 and 18* is/are rejected.

7)☒ Claim(s) *4-10 and 14-17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/12/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The references cited in CA and CC in the information disclosure statement filed 1/12/2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because they don't have an English translated version. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Abstract

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is not limited to a single paragraph within a range of 50 to 150 words.

Correction is required. See MPEP § 608.01(b).

Abstract

The abstract of the disclosure is objected to because

Abstract, line 2, "resp." is not clearly defined; "Fig. 1" should be deleted.

Correction is required. See MPEP § 608.01(b).

Specification

The disclosure is objected to because of the following informalities:

Specification, "resp." is not clearly defined.

Appropriate correction is required.

Specification

The disclosure is objected to because of the following informalities:

Specification, page 27, line 33, "distriution" should read -distribution-.

Appropriate correction is required.

Claim Objections

Claims 1 and 11 are objected to because of the following informalities:

Claims 1 and 11, "resp." is not clearly specified.

Appropriate correction is required.

Claim Objections

Claims 4 and 14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Objections

Claims 5-10 and 15-17 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Objections

Claim 18 is objected to because of the following informalities:

In regard to claim 18, the dependency of claim 18 from claims 1-10 or claims 11-17 is confusing and unclear. In this regard, it is noted that as one of ordinary skill in the art at the time the invention was made would fairly and reasonably interpret the language used in claim 18, the invention of claim 18 is directed to a system for recording, transmitting and analyzing data and information accrued from, in particular low-frequency, electromagnetic radiation. However, it is noted that as one having ordinary skill in the art at the time the invention was made would fairly and reasonably interpret the language used in claim 18, the invention of claim 18 is directed to a method for recording, transmitting and analyzing data and information accrued from, in particular low-frequency, electromagnetic radiation, where the electromagnetic radiation originates from at least one impulse source of natural and/or artificial origin, in particular from at least one atmospheric discharge or from at least one transmitter.

In view of the switching of the type of the statutory class of invention in this claim, then it is unclear whether claim 18 is to be considered as:

A) dependent claim directed to a process for manipulating data/information; or

B) independent claim directed to an apparatus for manipulating data/information.

Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) and see also MPEP 2173.05(p).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 11-13, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Markson et al. (US Patent No. 6,246,367 B1)- provided by Applicant.

Referring to claim 1, Markson et al. disclose a system (100) for recording, transmitting and analyzing data and information (D and D*, resp.) accrued from, in particular low-frequency, electromagnetic radiation (Figures 7 & 10), comprising

several spatially separated measuring stations (20 and 20*, resp.) (col. 6, lines 7-37)

with at least one respective, in particular broadband, antenna body (30), for recording signals (S and S*, resp.) which are assignable to the electromagnetic radiation (col. 6, lines 38-42; Figures 7 & 10), and

with at least one respective time measurement facility (38), in particular at least one respective G[lobal]P[ositioning]S[ystem] clock for determining the respective time progression (col. 6, lines 46-60), in particular the respective arrival-time, of the recorded signals (S and S*, resp.) (col. 7, lines 52-67 to col. 8, lines 1-9), characterized in that

the electromagnetic radiation originates from at least one impulse source of natural and/or artificial origin, in particular from at least one atmospheric discharge (P) or from at least one transmitter (K) (col. 7, lines 52-67 to col. 8, lines 1-9), and that

the altitude (H) of the impulse source, in particular the emission altitude or the transmission altitude (col. 7, lines 63-66), and/or

the directionality (C), in particular the spatial direction path, of the impulse emission or impulse broadcast caused by the impulse source (col. 9, lines 17-27)

may be localized in that the deviation of the arrival time of the signal (S) on the measuring station (20) located closest to the impulse source from the arrival time of the signal (S*) on at least one, preferably at least two, measuring stations (20*) which are not located closest to said impulse source, is determinable (col. 6, lines 23-37; col. 7, lines 52-67 to col. 8, lines 1-9).

As to claim 2, Markson et al. disclose a system (100) for recording, transmitting and analyzing data and information (D and D*, resp.) accrued from, in particular low-frequency, electromagnetic radiation (Figures 7 & 10), characterized in that in particular with line-formed impulse sources, the directionality (C) of the impulse emission or impulse broadcast

is identifiable as being essentially vertical, when the amplitude (A) of the signal (S and S*, resp.) is reciprocally proportional to the distance (R) between the impulse source and the respective measuring station (20 and 20*, resp.) (col. 2, lines 16-29; col. 3, lines 36-52; col. 4, lines 52-67 to col. 5, lines 1-15; col. 5, lines 61-67 to col. 6, lines 1-6; col. 9, lines 28-43), and

is identifiable as being essentially horizontal, when the amplitude (A) of the signal (S and S*, resp.) deviates from the reciprocal proportionality (col. 2, lines 16-29; col. 3, lines 36-52;

col. 4, lines 52-67 to col. 5, lines 1-15; col. 5, lines 61-67 to col. 6, lines 1-6; col. 9, lines 28-43), wherein this deviation is correctable by considering

the altitude angle, and

the angle between the impulse emission or impulse broadcast axis, in particular the discharge axis and the direction to the respective measuring station (20 and 20*, resp.) (col. 11, lines 44-67 to col. 12, lines 1-65).

Referring to claim 3, Markson et al. disclose a system (100) for recording, transmitting and analyzing data and information (D and D*, resp.) accrued from, in particular low-frequency, electromagnetic radiation (Figures 7 & 10), characterized in

that several signals (S and S*, resp.) which originate from impulse sources in a spatially limited and/or time limited range can be combined (col. 3, lines 53-58; col. 7, lines 36-42), and

that the deviation of the amplitude (A) of an individual signal (S and S*, resp.) in particular for providing the average deviation of the amplitude (A), can be correlated with the group assigned to the signal (S and S*, resp.), in particular in order to eliminate a damping effect conditional upon a variable ground conductivity (col. 11, lines 44-67 to col. 12, lines 1-65).

As to claim 11, Markson et al. disclose a method for recording, transmitting and analyzing data and information (D and D*, resp.) accrued from, in particular low-frequency, electromagnetic radiation, where the electromagnetic radiation originates from at least one impulse source of natural and/or artificial origin, in particular from at least one atmospheric discharge (P) or from at least one transmitter (K) (Figures 7 & 10), in which method

[i] signals (S and S*, resp.) which are assignable to the electromagnetic radiation are recorded using several spatially separated measuring stations (20 and 20*, resp.) (col. 6, lines 7-37), in particular using at least one, for example broad band, antenna body (30) which is assigned to the respective measuring station (20 and 20*, resp.) (col. 6, lines 38-42; Figures 7 & 10),

[ii] the respective time progression, in particular the respective arrival time, of the recorded signals (S and S*, resp.) is determined using at least one time measurement facility (38), in particular using at least one GPS clock, which is assigned to the respective measuring station (20 and 20*, resp.) (col. 6, lines 46-60; col. 7, lines 52-67 to col. 8, lines 1-9), and

[iii] the altitude (H) of the impulse source (col. 7, lines 63-66), in particular the emission altitude or the broadcast altitude, and/or the directional information (C), in particular the spatial direction path (col. 9, lines 17-27), of the impulse emission created by the impulse source is localized by determining the difference between the arrival time of the signal (S) at the measuring station (20) located closest to the impulse source and the arrival time of the signal (S*) at at least one, preferably at least two, measuring stations (20*) which are not located closest to said impulse source (col. 6, lines 23-37; col. 7, lines 52-67 to col. 8, lines 1-9).

Referring to claim 12, Markson et al. disclose a method for recording, transmitting and analyzing data and information (D and D*, resp.) accrued from, in particular low-frequency, electromagnetic radiation, where the electromagnetic radiation originates from at least one impulse source of natural and/or artificial origin, in particular from at least one atmospheric discharge (P) or from at least one transmitter (K) (Figures 7 & 10), characterized in that the directional information (C) of the impulse emission or impulse broadcast

is identified as being essentially vertical, when the amplitude (A) of the signal (S and S*, resp.) is reciprocally proportional to the distance (R) between the impulse source and the respective measuring station (20 and 20*, resp.) (col. 2, lines 16-29; col. 3, lines 36-52; col. 4, lines 52-67 to col. 5, lines 1-15; col. 5, lines 61-67 to col. 6, lines 1-6; col. 9, lines 28-43), and

is identified as being essentially horizontal, when the amplitude (A) of the signal (S and S*, resp.) deviates from the reciprocal proportionality, wherein this deviation can be corrected by taking into account the altitude angle, and the angle between the impulse emission or impulse broadcast axis, in particular discharge axis, and the direction to the respective measuring station (20 and 20*, resp.) (col. 2, lines 16-29; col. 3, lines 36-52; col. 4, lines 52-67 to col. 5, lines 1-15; col. 5, lines 61-67 to col. 6, lines 1-6; col. 9, lines 28-43).

As to claim 13, Markson et al. disclose a method for recording, transmitting and analyzing data and information (D and D*, resp.) accrued from, in particular low-frequency, electromagnetic radiation, where the electromagnetic radiation originates from at least one impulse source of natural and/or artificial origin, in particular from at least one atmospheric discharge (P) or from at least one transmitter (K) (Figures 7 & 10), characterized in that impulse emissions or impulse broadcasts, in particular discharges (P), within a cloud (W) and/or between at least two clouds (W) can be differentiated from impulse emissions or impulse broadcasts, in particular discharges (P), between the cloud (W) and the earth (E) (col. 2, lines 16-29; col. 3, lines 36-52; col. 4, lines 52-67 to col. 5, lines 1-15; col. 5, lines 61-67 to col. 6, lines 1-6; col. 9, lines 28-43).

Referring to claim 18, Markson et al. disclose use of at least one system (100) and/or of a method

for the localization

of the altitude (H) of the impulse source, in particular of the emission altitude (col. 7, lines 63-66) or

of the broadcast altitude, and/or of the directionality (C), in particular of the spatial directional path, of the impulse emission or impulse broadcast caused by the impulse source (col. 9, lines 17-27), and/or

for calibrating and/or for adjusting at least one of the measuring stations (20 and 20*, resp.), and/or

for the delimitation of impulse emissions or impulse broadcasts, in particular discharges (P), within a cloud (W) and/or between at least two clouds (W) as opposed to impulse emissions or impulse broadcasts, in particular discharges (P), between cloud (W) and earth (E) (col. 2, lines 16-29; col. 3, lines 36-52; col. 4, lines 52-67 to col. 5, lines 1-15; col. 5, lines 61-67 to col. 6, lines 1-6; col. 9, lines 28-43), and/or

for producing lightning density maps (col. 8, lines 20-40), and/or

for precisely recording the time and/or structure of the impulses, even when weak and/or irregularly formed lightning impulses are used (col. 8, lines 41-47).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

"Lightning Detecting and Locating System: Technical and Economical Aspects Regarding Its Introduction to the IEC Power System", Laszlo et al., 17th Convention of Electrical and Electronics Engineers in Israel, 5-7 March 1991, Pages 334-337

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN M. LE whose telephone number is (571)272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael P. Nghiem/
Primary Examiner, GAU 2863

Toan Le
/TL/
March 4, 2009